Claims

1. A process for the production of a security element for value documents such as banknotes, credit cards, identity cards or passes or tickets with a partial magnetic coating,

characterised in that

an adhesive layer (11p, 11s, 11v) of a radiation-crosslinkable adhesive is applied to a first film body (51, 61), the adhesive layer (11p, 11s, 11v) of the radiation-crosslinkable adhesive is applied in a form structured in pattern form to the first film body (51, 61) and/or is irradiated in pattern form in such a way that the adhesive layer (11p, 11s, 11v) hardens structured in pattern form, a transfer film (41) which has a carrier film (42) and a magnetic layer (44) is applied to the adhesive layer (11p, 11s, 11v) with an orientation of the magnetic layer (44) relative to the adhesive layer (11p, 11s, 11v) and the carrier film (42) is removed from the second film body comprising the first film body (51, 61), the adhesive layer (11p, 11s, 11v) and the magnetic layer (44) so that the magnetic layer (44) remains on the first film body (51, 61) in a first region structured in pattern form and the magnetic layer (44) remains on the carrier film (42) in a second region structured in pattern form and is removed with the carrier film (42) from the first film body (51, 61).

2. A process according to claim 1 characterised in that the adhesive layer (11p, 11s, 11v) of a radiation-crosslinkable adhesive is applied structured in pattern form to the first film body (51, 61) by means of a printing process, the transfer film (41) is applied to the adhesive layer (11p, 11s, 11v) which is structured in pattern form, the adhesive layer (11p, 11s, 11v) is hardened by radiation and the carrier film (42) is removed from the second film body including the first film body (51, 61), the adhesive layer (11p, 11s, 11v) and the magnetic layer (44) so that the magnetic layer (44) remains on the first film body (51, 61) in the first region coated in pattern form with the radiation-crosslinkable adhesive (11p, 11s, 11v) and is removed in the other second region with the carrier film (42).

3. A process according to claim 1 characterised in that the adhesive layer (11p, 11s, 11v) of a radiation-crosslinkable adhesive is exposed in pattern form after application of the transfer film (41), whereby the adhesive layer (11p, 11s, 11v) hardens in a region which is structured in pattern form, and the carrier film (42) is removed from the second film body including the first film body (51, 61), the adhesive layer (11p, 11s, 11v) and the magnetic layer (44) so that the magnetic layer (44) remains on the first film body (51, 61) in the first region which is structured in pattern form and in which the adhesive layer (11p, 11s, 11v) is hardened, and is removed with the carrier film (42) in the second region in which the adhesive layer (11p, 11s, 11v) is not hardened, wherein the radiation-crosslinkable adhesive in the non-hardened condition has a lower adhesion force in relation to the magnetic layer (44) than the adhesion force between the magnetic layer (44) and the carrier film (42).

4. A process according to claim 1 characterised in that the adhesive layer (11p, 11s, 11v) of a radiation-crosslinkable adhesive is irradiated in pattern form prior to application of the transfer film (42) in such a way that the adhesive layer (11p, 11s, 11v) hardens in a region which is structured in pattern form, the transfer film (42) is applied to the adhesive layer (11p, 11s, 11v) which is hardened structured in pattern form, and the carrier film (42) is removed from the second film body including the first film body (51, 61), the adhesive layer (11p, 11s, 11v) and the magnetic layer (44) so that the magnetic layer (44) remains on the first film body (51, 52) in the first region which is structured in pattern form and in which the adhesive layer (11p, 11s, 11v) is not hardened and is removed with the carrier film (42) in the second region which is structured in pattern form and in which the adhesive layer (11p, 11s, 11v) is hardened.

5. A process according to one of claims 3 and 4 characterised in that the adhesive layer (11p, 11s, 11v) is then irradiated in a second exposure step for hardening of the regions which have not yet hardened of the adhesive layer (11p, 11s, 11v).

6. A process according to one of claims 3 to 5 characterised in that a mask exposure device, in particular a drum exposure device (81t) or a mask exposure device (81m) with a mask belt (83b) is used for the exposure operation.

7. A process according to one of the preceding claims characterised in that the magnetic layer (44) is a layer of magnetic nanoparticles, preferably of iron oxide.

8. A process according to claim 7 characterised in that the layer of nanoparticles is applied as a deposit from a solution to the carrier film (42).

9. A process according to claim 7 characterised in that the magnetic layer is applied to the carrier film (42) by sputtering.

10. A process according to one of the preceding claims characterised in that the magnetic layer (44) comprises amorphous metal glass.

11. A process according to claim 10 characterised in that the amorphous metal glass is formed from iron and/or cobalt and/or chromium and/or nickel and/or silicon and/or boron, preferably applied to the carrier film (42) by sputtering.

12. A process according to one of the preceding claims characterised in that the magnetic layer (44) is semi-transparent, the carrier layer (42) is radiation-transparent and the adhesive layer (11p, 11s, 11v) is exposed from the side of the transfer film (41) through the transfer film (41).

13. A process according to one of the preceding claims characterised in that the first film body (51, 61) is radiation-transparent and the adhesive layer (11p, 11s, 11v) is exposed from the side of the first film body (51, 61) through the first film body (51, 61).

14. A process according to one of the preceding claims characterised in that a radiation-crosslinkable adhesive is used, which in the non-hardened condition has a lower adhesion force in relation to the magnetic

layer than the adhesion force between the magnetic layer (44) and the carrier film (42).

15. A process according to one of the preceding claims characterised in that the adhesive layer (11p, 11s, 11v) comprises an electrically non-conductive adhesive.

16. A process according to one of the preceding claims characterised in that the adhesive layer (11p, 11s, 11v) is applied to the first film body (51, 61) by means of intaglio printing.

17. A process according to one of the preceding claims characterised in that the adhesive layer (11p, 11s, 11v) is applied to the first film body (51, 61) by means of offset printing or flexoprinting.

18. A process according to one of the preceding claims characterised in that a transfer film (41) is used which has a release layer (43) between the carrier film (42) and the magnetic layer (44).

19. A security element, in particular a security thread, comprising at least one magnetic layer (44),

characterised in that

the security element has an adhesive layer (11p, 11s, 11v) comprising a radiation-crosslinkable adhesive and the adhesive layer (11p, 11s, 11v) is arranged between a magnetic layer (44) structured in pattern form and a first film body (51, 61) of the security element and connects the magnetic layer (44) structured in pattern form to the first film body (51, 61).

20. A security element according to claim 19 characterised in that the magnetic layer is formed from magnetic nanoparticles, preferably iron oxide.

21. A security element according to one of claims 19 and 20 characterised in that the magnetic layer (44) is made from amorphous metal glass.

22. A security element according to one of claims 19 to 21 characterised in that the first film body (51, 61) has a metal layer, preferably a partial metal layer.

23. A security element according to claim 22 characterised in that the first film body (51, 61) is metallised with aluminium.

24. A security element according to one of claims 21 and 23 characterised in that a diffractive structure is shaped into the metal layer.

25. A security element according to one of claims 23 and 24 characterised in that the first film body is partially metallised with aluminium and the adhesive layer and the magnetic layer are applied to the partially metallised aluminium layer in register relationship with the regions partially metallised with aluminium.

26. A security element according to one of claims 19 to 25 characterised in that the adhesive layer (11p, 11s, 11v) of a radiation-crosslinkable adhesive is structured in pattern form in the same way as the magnetic layer (44) which is structured in pattern form.

27. A security element according to one of claims 19 to 26 characterised in that the adhesive layer (11p, 11s, 11v) is in the form of adhesive which hardens under UV light.

28. A security element according to one of claims 19 to 27 characterised in that the adhesive layer (11p, 11s, 11v) is in the form of a non-conducting layer for preventing local element formation between the magnetic layer (44) and the metal layer of the first film body (51, 61).